

ABSTRACT OF THE DISCLOSURE

An apparatus using transmitting antenna diversity to combat degradation due to fading in a wireless communication system. At least two symbols of four symbols to be transmitted through four transmitting antennas are rotated by 5 predetermined phase values. An encoder configures four combinations for four input symbols so that a sequence of four symbols can be transmitted once by each transmitting antenna during each time interval. The combinations are transferred to the four transmitting antennas during four time intervals. Before the four input symbols are transmitted to the transmitting antennas, at least two 10 symbols selected from the four input symbols are rotated by predetermined phase values. Therefore, the maximum diversity order can be obtained, a transmission delay time can be reduced, and the effect of fast fading can be reduced.